

## REPORT ON BOILERS.

No. 15762

Received at London Office 3 - NOV 1926

Date of writing Report 15-10-1926 When handed in at Local Office

192

Port of

Rotterdam

No. in Reg. Book.

Survey held at

Rotterdam

Date, First Survey

9-4-26

Last Survey

30-9-1926

on the

Steel twin screw steamer MATILDE

(Number of Visits 17)

Gross

Tons

Net

Master

Built at

Schiedam

By whom built

Scheps. My. Nieuwe Waterweg No. 140

When built

1926

Engines made at

Rotterdam

By whom made

Rott. Droogd. My.

Engine No. 151-52

When made

1926

Boilers made at

Rotterdam

By whom made

Rott. Droogd. My.

Boiler No. 425-26

When made

1926

Nominal Horse Power

236

Owners

Curacaosche Scheps. My.

Port belonging to

Willemstad.

MULTITUBULAR BOILERS—MAIN, ~~AUXILIARY~~, OR DONKEY.

Manufacturers of Steel

Messrs William Beardmore &amp; Co. Ltd.

(Letter for Record

S ✓)

Total Heating Surface of Boilers

4168 sq ft

Is forced draught fitted

Yes ✓

Coal or Oil fired

oil ✓

No. and Description of Boilers

2 single ended Multitubular Marine Boilers

Working Pressure

180 lbs ✓

Tested by hydraulic pressure to

320 lbs ✓

Date of test

22-7-26

No. of Certificate

844 ✓

Can each boiler be worked separately

Yes ✓

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

2 high lifting spring loaded ✓

Area of each set of valves per boiler

per Rule ✓  
as fitted 70 sq ft diam 5.95

Pressure to which they are adjusted

180 lbs ✓

Are they fitted with easing gear

Yes ✓

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler

No donkey boiler ✓

Smallest distance between boilers or uptakes and bunkers or woodwork

Over 3'-0" ✓

Is oil fuel carried in the double bottom under boilers

no ✓

Smallest distance between shell of boiler and tank top plating

No tank ✓

Is the bottom of the boiler insulated

Yes ✓

Largest internal dia. of boilers

13'-0" ✓

Length

12'-3" ✓

Shell plates: Material

S.M. steel ✓

Tensile strength

20-32 tons ✓

Thickness

1 3/32" ✓

Are the shell plates welded or flanged

no ✓

Description of riveting: circ. seams

end lap 2 x cir. ✓

long. seams

Double butt 3 x cir ✓

Diameter of rivet holes in

circ. seams 1 3/16" ✓  
long. seams 1 3/16" ✓

Pitch of rivets

3 3/16" ✓  
8 1/8" ✓

Percentage of strength of circ. end seams

plate 62.9%  
rivets 52.5% ✓

Percentage of strength of circ. intermediate seam

plate ✓  
rivets ✓

Percentage of strength of longitudinal joint

plate 85.4%  
rivets 88%  
combined 88.2% ✓

Working pressure of shell by Rules

195 lbs ✓

Thickness of butt straps

outer 7/8" ✓  
inner 1" ✓

No. and Description of Furnaces in each Boiler

2 Morrison's patent ✓

Material

S.M. steel ✓

Tensile strength

26-30 tons ✓

Smallest outside diameter

3'-11 1/8" ✓

Length of plain part

top ✓  
bottom ✓

Thickness of plates

crown 3 1/32" ✓  
bottom 3 1/32" ✓

Description of longitudinal joint

Welded ✓

Dimensions of stiffening rings on furnace or c.c. bottom

none ✓

Working pressure of furnace by Rules

200 lbs ✓

End plates in steam space: Material

S.M. steel ✓

Tensile strength

26-30 tons ✓

Thickness

1 1/8" ✓

Pitch of stays

17" x 16" ✓

How are stays secured

Screwed in plates and nutted outside ✓

Working pressure by Rules

210 lbs ✓

Tube plates: Material

front S.M. steel ✓  
back S.M. steel ✓

Tensile strength

26-30 tons ✓  
26-30 tons ✓

Thickness

3/16" ✓  
3/4" ✓

Mean pitch of stay tubes in nests

8" x 12" ✓

Pitch across wide water spaces

14 3/4" ✓

Working pressure

front 197 lbs ✓  
back 185 lbs ✓

Girders to combustion chamber tops: Material

S.M. steel ✓

Tensile strength

20-32 tons ✓

Depth and thickness of girder

at centre

8 1/2" x 2 x 3/4" ✓

Length as per Rule

2'-7 1/2" ✓

Distance apart

8 1/2" ✓

No. and pitch of stays

in each

2 x 10" ✓

Working pressure by Rules

290 lbs ✓

Combustion chamber plates: Material

S.M. steel ✓

Tensile strength

26-30 tons ✓

Thickness: Sides

7/8" ✓

Back

3/4" ✓

Top

7/8" ✓

Bottom

7/8" ✓

Pitch of stays to ditto: Sides

9 3/4" x 10" ✓

Back

8" x 7 3/4" ✓

Top

10" x 8 1/2" ✓

Are stays fitted with nuts or riveted over

Riveted over ✓

Working pressure by Rules

207 lbs ✓

Front plate at bottom: Material

S.M. steel ✓

Tensile strength

26-30 tons ✓

Thickness

13/16" ✓

Lower back plate: Material

S.M. steel ✓

Tensile strength

26-30 tons ✓

Thickness

3/4" ✓

Pitch of stays at wide water space

15 5/8" ✓

Are stays fitted with nuts or riveted over

Fitted with nuts ✓

Working Pressure

312 lbs ✓

Main stays: Material

S.M. steel ✓

Tensile strength

26-30 tons ✓

Diameter

At body of stay, 2 1/2" ✓  
or Over threads 2 3/4" ✓

No. of threads per inch

9 ✓

Area supported by each stay

2 1/2 sq in ✓

Working pressure by Rules

203 lbs ✓

Screw stays: Material

S.M. steel ✓

Tensile strength

26-30 tons ✓

Diameter

At turned off part, 1 3/8" ✓  
or Over threads 1 1/2" ✓

No. of threads per inch

9 ✓

Area supported by each stay

47.5-62-85 sq in ✓



Working pressure by Rules <sup>105 lbs</sup> 202 lbs. Are the stays drilled at the outer ends *No* ✓ Margin stays: Diameter { At turned off part, <sup>1 5/8"</sup> ✓  
or <sup>1 3/4"</sup> ✓  
Over threads }  
No. of threads per inch <sup>9</sup> ✓ Area supported by each stay <sup>84 sq"</sup> ✓ Working pressure by Rules <sup>216 lbs</sup> ✓  
Tubes: Material *steel* ✓ External diameter { Plain <sup>2 3/4"</sup> ✓  
Stay <sup>2 3/4"</sup> ✓ Thickness <sup>1120 L.S.G.</sup> <sup>2 1/64" + 9/32"</sup> No. of threads per inch <sup>9</sup> ✓  
Pitch of tubes <sup>4"</sup> ✓ Working pressure by Rules <sup>207 lbs</sup> ✓ Manhole compensation: Size of opening in  
shell plate <sup>20 3/4" x 16 3/4"</sup> ✓ Section of compensating ring <sup>8 1/4" x 8 1/8"</sup> ✓ No. of rivets and diameter of rivet holes <sup>42 x 1 3/16"</sup> ✓  
Outer row rivet pitch at ends <sup>7"</sup> ✓ Depth of flange if manhole flanged <sup>3 1/2"</sup> ✓ Steam Dome: Material ✓  
Tensile strength ✓ Thickness of shell ✓ Description of longitudinal joint ✓  
Diameter of rivet holes ✓ Pitch of rivets ✓ Percentage of strength of joint { Plate ✓  
Rivets ✓  
Internal diameter ✓ Working pressure by Rules ✓ Thickness of crown ✓ No. and diameter of  
stays ✓ Inner radius of crown ✓ Working pressure by Rules ✓  
How connected to shell ✓ Size of doubling plate under dome ✓ Diameter of rivet holes and pitch  
of rivets in outer row in dome connection to shell ✓

Type of Superheater ✓ Manufacturers of { Tubes ✓  
Steel castings ✓  
Number of elements ✓ Material of tubes ✓ Internal diameter and thickness of tubes ✓  
Material of headers ✓ Tensile strength ✓ Thickness ✓ Can the superheater be shut off and  
the boiler be worked separately ✓ Is a safety valve fitted to every part of the superheater which can be shut off from the boiler ✓  
Area of each safety valve ✓ Are the safety valves fitted with easing gear ✓ Working pressure as per  
Rules ✓ Pressure to which the safety valves are adjusted ✓ Hydraulic test pressure:  
tubes ✓, castings ✓ and after assembly in place ✓ Are drain cocks or valves fitted  
to free the superheater from water where necessary ✓

Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with *Yes* ✓

The foregoing is a correct description,

*A. H. Mape* Manufacturer.  
DIRECTOR

Dates { During progress of work in shops - - <sup>9/4-14-27/4-3/5-22/5-1/6-17/6</sup> Are the approved plans of boiler and superheater forwarded herewith ✓  
(If not state date of approval.)  
while building { During erection on board vessel - - - <sup>24/6-30/6-3/7-10-14-16-22/8</sup>  
<sup>3/9-16/9-30/9-26</sup> Total No. of visits <sup>17</sup> ✓

# GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

*These boilers have been built under special survey in accordance with the Society's Rules, Secretary's letters and approved plans, material tested as required and workmanship good. Boilers tested by hydraulic pressure as required by the Rules and found sound and tight.*

Survey Fee ... .. £

Travelling Expenses (if any) £

When applied for, 192

When received, 192

Committee's Minute

FRI. 5 NOV 1928

Assigned

*See H. E. p. on machy attached*

*J. J. Oetwa*  
Engineer Surveyor to Lloyd's Register of Shipping.



© 2020

Lloyd's Register Foundation